

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method for preparing an internucleotide phosphorothioate linkage enriched in the Sp enantiomer between a synthon having a hydroxyl moiety at the 5' position and a 2'-substituted nucleoside having ~~an activated phosphate moiety~~ a phosphoramidite at the 3'-position comprising selecting a coupling agent having a pKa ranging from about 3.3 to about 4.5 and coupling said synthon to said 2'-substituted nucleoside in the presence of said coupling agent.
2. (Original) The method of claim 1 wherein said first synthon is bound to a support.
3. (Original) The method of claim 1 wherein said coupling agent has a pKa ranging from about 3.4 to about 4.4.
4. (Original) The method of claim 1 wherein said coupling agent has a pKa ranging from about 3.5 to about 4.3.
5. (Original) The method of claim 1 wherein said coupling agent has a pKa ranging from about 3.6 to about 4.3.
6. (Original) The method of claim 1 wherein said coupling agent has a pKa ranging from about 3.7 to about 4.3.

7. (Original) The method of claim 1 wherein said coupling agent is 5-(ethylthio)-1*H*-tetrazole.
8. (Original) The method of claim 1 wherein said 2'-substituent is attached to the 2'-position through an oxygen atom.
9. (Original) The method of claim 8 wherein said 2'-substituent is O-alkyl, $O(CH_2)_nOCH_3$, or $O[(CH_2)_nO]_mCH_3$, wherein n and m are from about 1 to about 10.
10. (Original) The method of claim 1 wherein said 2'-substituent is 2'-O-alkyl.
11. (Original) The method of claim 10 wherein said alkyl group is C_1 to C_{12} alkyl.
12. (Original) The method of claim 11 wherein said alkyl group is methyl.
13. (Currently amended) The method of claim 9 ~~wherein said~~ wherein said 2'-substituent is $O(CH_2)_nOCH_3$ wherein n is from about 1 to about 3.
14. (Original) The method of claim 9 wherein said 2'-substituent is $O(CH_2)_2OCH_3$.
15. (Currently amended) The method of claim 1 wherein said ~~activated phosphate moiety~~ phosphoramidite comprises a *B*-cyanoethyl protecting group.

16. (Currently amended) The method of claim 1 wherein said ~~activated phosphate moiety~~ phosphoramidite comprises an acetoxy phenoxy ethyl group.

17-32. (Canceled)

33. (Currently amended) A method for preparing an oligonucleotide having at least one region of internucleotide linkages that is enhanced in the Sp enantiomer comprising:

providing a nucleotide having a hydroxyl moiety at the 5'-position or a growing oligonucleotide chain having a hydroxyl moiety at the 5'-position;

coupling said nucleotide or growing oligonucleotide chain to a 2'-substituted nucleoside having ~~an activated phosphate moiety~~ a phosphoramidite at the 3'-position in the presence of a coupling agent having a pKa ranging from about 3.3 to 4.5;

repeating said coupling step until the desired number of linkages is established.

34. (Original) The method of claim 33 wherein said oligonucleotide having at least one region of internucleotide linkages that is enhanced in the Sp enantiomer is further processed to include another region of internucleotide linkages that is enhanced in the Sp enantiomer.

35. (Original) The method of claim 34 wherein said oligonucleotide having at least one region of internucleotide linkages that is enhanced in the Sp enantiomer is further processed to include at least one region of internucleotide linkages that is enhanced in the Rp enantiomer.

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36. (Original) The method of claim 35 wherein said oligonucleotide having at least one region of internucleotide linkages that is enhanced in the Sp enantiomer and at least one region that is enhanced in the Rp enantiomer is further processed to include another region of internucleotide linkages that is enhanced in the Sp enantiomer.

37-40. (Canceled)